

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

TITLE V No. V-03-046 (REVISION 1)
TOKICO (USA), INC.
BEREA, KY.
APRIL 5, 2006
MIN WANG, REVIEWER
PLANT I.D. # 21-151-00042
APPLICATION LOG # 50840/APE# 20050002
AI# 2859

SOURCE DESCRIPTION:

Tokico (USA) is a hard chromium electroplating facility in Berea, Kentucky and has applied for a Title V permit as required by 40 CFR 63 Subpart N – National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks. The plant consists primarily of 2 coating lines (each capable of processing approximately 960 pieces per hour) and 4 chromium electroplating lines (each capable of plating 360 parts per hour). The shocks and struts are for use in automobiles. The permit also covers 8 small boilers with a total capacity of 20.75 mmBTU.

MINOR REVISION NUMBER 1:

Tokico (USA) requested constructing the fifth new chromium electroplating line (CL5), and the minor revision is only needed to this Title V permit. There are three places where the content was modified or new content was added:

1. EP15 Chrome Plating line (CL5) (2005) was added to 02 Chrome Plating Operations in Section B. The Chrome Plating MACT, 40 CFR 63, Subpart N and 401KAR 59:010 will apply to this unit.
2. Testing Requirements were modified for 02 Chrome Plating Operations in Section B.
3. (d) Construction, Start-Up, and Initial Compliance Demonstration Requirements was added to Section G due to construction of the fifth new Chrome Plating line.

COMMENTS:

ELECTROSTATIC SPRAY PAINTING OPERATIONS-

EP01 and EP02 apply a water based paint from an electrostatic spray gun. Emissions are based on consultant estimates. Particulate emissions are controlled by dry booth filters at 99% efficiency. 401 KAR 59:010 applies. 401 KAR 59:225 Miscellaneous Metal Parts will not apply as Madison county is an attainment area and the source is not a major source as defined in 401 KAR 59:001.

No monitoring of emissions for particulates or opacity have been included. Tokico has never had a history of particulate or visibility issues. The permit does allow the Division to request additional tests in the event that it becomes necessary. This absence of monitoring is not a change from the draft permit, however this statement of explanation is an addition to the Statement of Basis.

Tokico has requested a limit of 90 tons per year of VOC to be applied to this point in order to preclude applicability of 401 KAR 59:225. The monitoring for this limit takes the form of calculating the emissions in a rolling 12 month total assuming 100% VOC emissions, calculated from records of coating use during that 12 month period.

CHROMIUM PLATING OPERATIONS-

Chromium and particulate emissions from EP03, EP04, EP05, and EP06 are controlled by composite mesh pad scrubber with an overall efficiency of 99.5%. Emission factors for emissions of PM and Chromium compounds are taken from AP-42. The applicable regulations are 40 CFR 63 Subpart N and 401 KAR 59:010.

The primary operating scenario calls for monitoring of the pressure drop over the composite mesh pad as a means of demonstrating continued compliance with the emissions limit. The appropriate pressure drop was determined in the initial compliance test. In the Proposed Permit, the Division has added an alternate operating scenario for Tokico to comply with emissions limitations. Currently Tokico adds a wetting agent to their chromium baths to control the surface tension. This practice allows Tokico the ability to monitor the surface tension of the chromium bath, which shall be conducted as the alternate scenario for compliance and monitoring. The surface tension will be maintained below 45 dynes/cm as measured by stalagmometer or 35 dynes/cm as measured by a tensiometer. The alternate operating scenario is intended for use when the primary monitoring scenario is not available.

BOILERS-

There are eight small natural gas fired boilers involved in process operations with a combined capacity of 20.75 mmBTU/hr. Individually considered, these boilers would be considered minor, except the applicable regulation, 401 KAR 59:015 – New indirect heat exchangers, is an additive regulation, so all must be considered together in the total capacity. The regulation (401 KAR 59:015) states that, in determining allowables for PM10 and SO2, the total heat input capacity is used. Even though allowables aren't calculated and stated specifically for this permit (as Tokico is required to burn only natural gas, and emissions from natural gas combustion will not exceed the allowables of 59:015), the regulation is still applicable to the total heat input capacity of all boilers over 1 mmBTU/hr at a source. Therefore, they cannot be listed as individual insignificant activities.

The draft permit originally listed only 7 boilers due to an oversight in the draft process. The additional boiler, EP14, has a capacity of 1.5 mmBTU/hr. It is part of the zinc plating line which is itself listed as an insignificant activity. Its boiler, however, needed to be added in with other affected boilers at Tokico, and has therefore been included in this Proposed Permit.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.